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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,646	09/02/2005	Walter Fix	411000-127	8470
27162 7590 10/19/2007 CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI, STEWART & OLSTEIN 5 BECKER FARM ROAD ROSELAND, NJ 07068			EXAMINER VORTMAN, ANATOLY	
			ART UNIT 2835	PAPER NUMBER
			MAIL DATE 10/19/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

EL

Office Action Summary	Application No. 10/524,646	Applicant(s) FIX ET AL.	
	Examiner Anatoly Vortman	Art Unit 2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :

2/17/05,9/26/05,10/31/05,5/24/07.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS's) filed on 05/24/07, 10/31/05, 09/26/05 and 02/17/05, fail to comply with 37 CFR 1.98(a)(3) because they do not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each reference listed that is not in the English language. There are numerous foreign and NPL references that are not in English language, which lack a translation and/or an explanation of the relevance, e.g.: EP/1134694; DE/10012204; DE/19816860, etc., just to name a few. Applicant must review all foreign and NPL references cited in all IDS's of record, in order to provide a translation and/or an explanation of relevance for each reference that is not in the English language.

Furthermore, Applicant did not provide the copies of the cited pending U.S. applications. In order to comply with 37 CFR 1.98 9(a) (2) (III), Applicant must provide for each cited pending unpublished U.S. application: the application specification including the claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion.

Therefore, in view of the above, the aforementioned IDS's have been placed in the application file, but the information referred to therein in relation to the foreign and NPL references and to the pending U.S. applications has not been considered. Only the information pertained to the published U.S. patent documents has been considered at this time.

Furthermore, the numerous references and materials listed on the submitted twenty two (22) sheets of the PTO-1449 make it difficult to determine whether or not any of the references, or parts of the references, are material to Applicants' claimed invention. The Examiner would like to point out that some of the cited references are believed to be not from the field of endeavor of the instant application, or related to the field of endeavor of the instant application so remotely that they may be considered not material to the patentability of the pending claims.

Applicants are reminded that where none of the prior art cited during prosecution teaches a key element of the claim(s) and where a reference known to the Applicants does, the Applicants should know that reference is material. *J.P. Stevens & Co. v. Lex Tex Ltd.*, 747 F.2d 1553, 223 USPQ 1089 (Nov. 9, 1984), *cert. denied*, 106 S.Ct. 73 (1985). Thus, if Applicants are aware of any cited reference from among the aforementioned information disclosure(s) that are "material", Applicants should make that reference known to the examiner.

It is also noted that it is "material if it [the submission] makes it impossible for the Patent Office fairly to assess [the patent] application against the prevailing statutory criteria". *In re Multidistrict-Litig. Involving Forst Patent*, 540 F.2d 601, 604, 191 USPQ 241, 243 (3d Cir. 1976); *see also Monsanto Co. v. Rohm & Haas Co.*, 456 F.2d 592, 600, 172 USPQ 323, 329 (3d Cir.), *ce.rt. denied*, 40'7 U.S. 934, 174 USPQ 129 (1972). And, the submission of voluminous documents in the instant information disclosure statements (here, in excess of three hundred forty (340) documents) make it difficult, and likely impossible, for the Patent Office to fairly assess Applicants' application against the prevailing statutory criteria.

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2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-4, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "predominantly organic functional polymers" in claim 1 is a relative term which renders the claim indefinite. The term is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Therefore, for the purpose of the art rejection, the claims have been interpreted as best understood by Examiner.

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 2, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative under 35 U.S.C. 103(a) as obvious over US/5,142,263 to Childers et al. (Childers).

Regarding claim 1, Childers disclosed (Fig. 5) an electronic component for overvoltage protection, comprising predominantly organic functional polymers (11) (col. 5, lines 3-7), which component has at least the following layers: a substrate (22), a primary electrode (21), an organic semiconducting functional layer (11), and a secondary electrode (21), wherein the threshold voltage is adjusted to a desired value by the selection of the material for the semiconducting layer (11) (col. 5, lines 3-7). Further, Examiner would like to direct the Applicant's attention to the fact that the limitations "the threshold voltage is adjusted to a desired value by the selection of the electrode materials and/or of the material for the semiconducting layer" are the process limitations directed to the method of making a device. Even though the claim is limited by and defined by the recited process, the determination of patentability of the product is based on the product itself, and does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). It is the patentability of the product claimed and not of the recited process steps which must be established. *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). It should also be noted that a "[p]roduct-by process claim, although reciting subject matter of claim in terms of how it is made, is still product claim; it is patentability of product claimed and not recited process steps that must be established, in spite of fact that claim may recite only process limitations", *In re Hirao and Sato*, 190 USPQ 15 (Fed. Cir. 1976). Therefore, even if to assume, *arguendo*, that Childers did not disclose the aforementioned

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process limitations, than said process limitations still would not have effect on the patentability of the product.

Alternatively, the selection of the semiconductor material to adjust the threshold voltage of the protection devices was a known technique at the time of the invention, which was used to adjust the threshold voltage of similar devices (e.g. of Zener diodes, tunnel diodes, etc.).

Therefore, applying the aforementioned known techniques to the protector of Childers would have yield predictable results (i.e. desired threshold voltage) and would have been obvious to a person of ordinary skill in the circuit protector art at the time of the invention to try with reasonable expectation of success. *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727 (2007).

Regarding claim 2, Childers disclosed at least one intermediate layer (27) between one of electrodes (21) and the organic semiconductor layer (11).

6. Alternatively, claims 1 and 2, are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative under 35 U.S.C. 103(a) as obvious over US/5,892,244 to Tanaka et al. (Tanaka).

Regarding claim 1, Tanaka disclosed (Fig. 1) an electronic component, comprising predominantly organic functional polymers (4), which component has at least the following layers: a substrate (1), a primary electrode (2), an organic semiconducting functional layer (4), and a secondary electrode (5 or 6), wherein the threshold voltage is adjusted to a desired value by the selection of the material for the semiconducting layer (inherently). Further, Examiner would like to direct the Applicant's attention to the fact that the limitations "the threshold voltage is adjusted to a desired value by the selection of the electrode materials and/or of the material for

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the semiconducting layer” are the process limitations directed to the method of making a device. Even though the claim is limited by and defined by the recited process, the determination of patentability of the product is based on the product itself, and does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). It is the patentability of the product claimed and not of the recited process steps which must be established. *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). It should also be noted that a “[p]roduct-by process claim, although reciting subject matter of claim in terms of how it is made, is still product claim; it is patentability of product claimed and not recited process steps that must be established, in spite of fact that claim may recite only process limitations”, *In re Hirao and Sato*, 190 USPQ 15 (Fed. Cir. 1976). Therefore, even if to assume, *arguendo*, that Tanaka did not disclose the aforementioned process limitations, than said process limitations still would not have effect on the patentability of the product.

Alternatively, the selection of the semiconductor material in order to adjust the threshold voltage of the protection devices was a known technique at the time of the invention, which was used to adjust the threshold voltage of similar devices (e.g. of Zener diodes, tunnel diodes, etc.).

Therefore, applying the aforementioned known techniques to the protector of Tanaka would have yield predictable results (i.e. desired threshold voltage) and would have been obvious to a person of ordinary skill in the circuit protector art at the time of the invention to try with reasonable expectation of success. *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727 (2007).

Regarding claim 2, Tanaka disclosed at least one intermediate layer (3) between one of electrodes (2) and the organic semiconductor layer (4).

7. Claims 3 and 4, are rejected under 35 U.S.C. 103(a) as being unpatentable over either Childers or Tanaka, each taken alone or alternatively over Childers or Tanaka, each taken with either US/5,780,995 to Maggioni et al. (Maggioni) or with US/4,573,099 to Ganesan et al. (Ganesan).

Regarding claims 3 and 4, Childers and Tanaka, each disclosed all, but that the at least two components are connected in series to afford a threshold voltage which corresponds to a multiple of threshold voltage of the individual components.

It would have been obvious to a person of ordinary skill in the circuit protector art at the time the invention was made to connect multiple components of Childers or Tanaka in series in order to achieve desired threshold voltage, since such a modification would have amount for a mere duplication of the essential working components of the device, which involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Alternatively, Ganesan (Fig. 1) teaches a plurality of Zener diodes (16, 18, 20, and 22) connected in series to achieve a desired threshold voltage (col. 3, lines 16-20).

Further, Maggioni (Fig. 1) also teaches a plurality of Zener diodes (DZ1-DZ3) connected in series to achieve a desired threshold voltage.

It would have been obvious to a person of ordinary skill in the circuit protector art at the time the invention was made to connect the components of Childers or Tanaka in series as taught by Maggioni or Ganesan, in order to achieve the desired threshold voltage.

Conclusion

8. The additional prior art made of record on PTO-892 and not relied upon is considered pertinent to Applicant's disclosure, because of the teachings of various protection devices utilizing organic semiconductors. Further, from the aforementioned references the US/5654863, 5347185, 3939363, 4598331, 6229180, 3668483, and 4797773 disclosed protection circuits employing Zener diodes.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anatoly Vortman whose telephone number is 571-272-2047. The examiner can normally be reached on Monday-Thursday, between 10:00 am and 8:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Jayprakash Gandhi can be reached on 571-272-3740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anatoly Vortman/
Primary Examiner
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AV